A recreational use attainability analysis (RUAA) was conducted on Walnut Creek (1242O) in the summer of 2010 to determine the appropriate recreational use and numeric criteria. Walnut Creek is an unclassified perennial water body that is approximately 25 miles in length. The creek is located in Robertson County. It was identified in the 2014 Texas Clean Water Act Section 303(d) List of Impaired Water Bodies due to elevated bacteria levels. It was initially listed in 2006.

The RUAA identified that the presumed use of primary contact recreation (PCR) for Walnut Creek should be revised to secondary contact recreation 1 (SCR 1). SCR applies to water bodies where water recreation can occur, but the nature of the recreation does not involve a significant risk of ingestion. SCR 1 applies to intermittent and perennial freshwaters where site-specific information demonstrates that primary contact recreation has little to no likelihood of occurring due to physical characteristics of the water body such as shallow depths or lack of pools.

During the field surveys, field staff did not observe any form of recreation occurring on the stream. One interview was conducted and that landowner stated that PCR was a personal use in the form of children wading and fishing. There were no accounts of witnessed or heard of PCR uses. Walnut Creek had an average thalweg of 0.27 meters (10.62 in) and had four pools deeper than 1 meter. Stream flow ranged from normal to no flow during both surveys. At the time of the surveys, Walnut Creek was experiencing moderately moist conditions according to the Palmer drought index. Public access is available from the road crossing at seven survey sites but property fences and dense vegetation did impede access. There are no public parks on the creek. Access into the stream is overall very limited due to private property fences and some steep banks and dense vegetation.

Naturally low water levels decrease the likelihood of PCR use. Walnut Creek has a shallow average depth and limited access, supporting reclassification to SCR1. In accordance with §307.4 (j)(3)(C) of the Texas Surface Water Quality Standards, the TCEQ recommends a reclassification from PCR to SCR1 with the corresponding geometric mean of 630 colonies *E. coli*/100mL for all of Walnut Creek, from the confluence with the Little Brazos River in Robertson County, upstream to the headwaters, one mile south of White Rock. This reclassification is appropriate due to "natural, ephemeral, intermittent low flow conditions or water levels" in accordance with reasons specified in 40 CFR §131.10(g)(2).

Prior to changing the currently assigned recreational use of Walnut Creek in the Texas Surface Water Quality Standards, the TCEQ would provide additional public notice and opportunity for public comment. In addition, the U.S. Environmental Protection Agency would review this proposed change under the provisions of the federal Clean Water Act.